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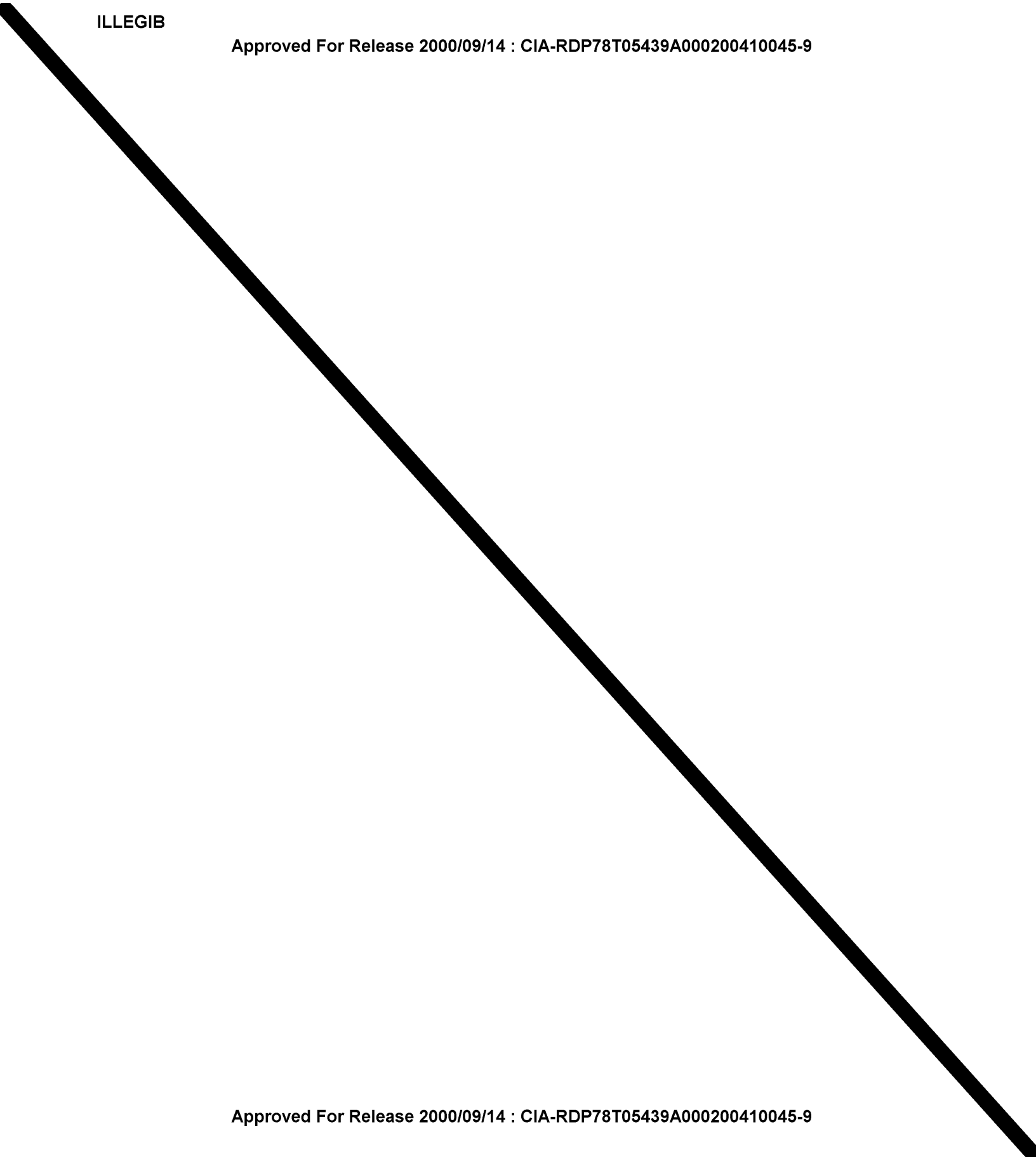

Approved For Release 2000/09/14 : CIA-RDP78T05439A000200410045-9

~~TOP SECRET RUFF~~
NO FOREIGN DISSEM

PHOTOGRAPHIC INTERPRETATION REPORT

TEST FACILITY
TU-KO-MA-CHING, CHINA

NPIC/R-176/63
August 1963

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

~~TOP SECRET RUFF~~
NO FOREIGN DISSEM

NPIC/R-176/63

INTRODUCTION

25X1D

Photography of [redacted] reveals a test facility located in northern China at 40-51N 109-38E. This facility is situated 4.9 nautical miles (nm) west of Tu-ko-ma-ching, 24 (nm) northwest of Pao-tou, and 375 nm west-northwest of Peiping (Figure 1). It is served by a single-track rail spur which extends east from the facility approximately 10.5 nm where it connects with the main line leading north from Pao-tou. The nearest major airfield is located at Pao-tou. This facility was first observed on KEYHOLE photography of [redacted] and at that time was identified as a probable propulsion test facility.

25X1D
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The facility consists of a firing complex, an explosives handling area that probably includes explosives processing facilities, an explosives storage area, a housing area, a communications station, an instrumented range, and an unidentified facility under construction 2.5 nm southwest of the firing area and 0.75 nm south of instrumentation line No 1 (Figure 2).

This installation is considered to be engaged primarily in the testing of various types of weapons, as indicated by the 10 different pad configurations. These weapons may range from artillery to unguided rockets, and possibly include cruise missiles. The dating of the facility could not be traced back beyond [redacted], but it is conceivable that although formerly the facility was used solely for the development of artillery, it now has been expanded to probably include rocket/missile testing. The extent

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25X1D

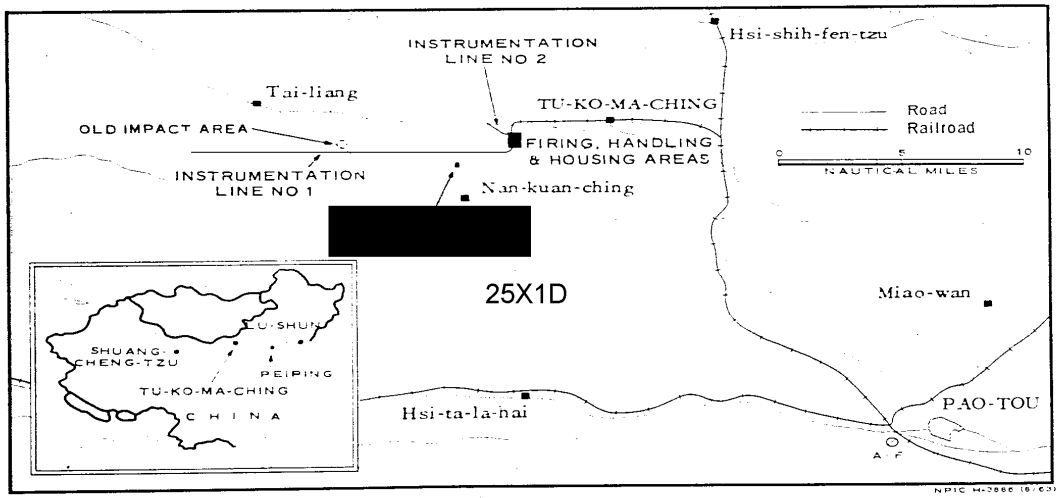


FIGURE 1. LOCATION MAP SHOWING COMPLEX AND RANGES.

NPIC/R-176/63

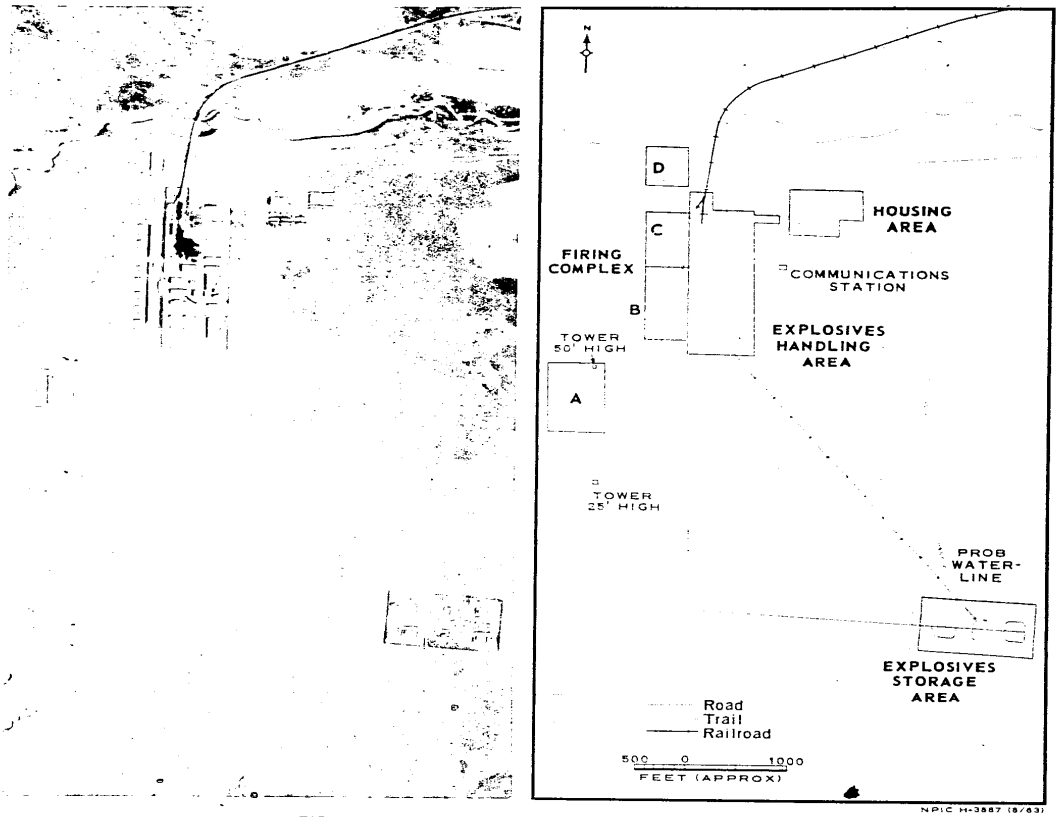


FIGURE 2. TEST FACILITY, TU-KO-MA-CHING, CHINA.

and type of weapon now primarily tested cannot be determined. To date, there is no evidence of missile debris downrange, west, from the firing areas.

FIRING COMPLEX

The firing complex is divided into areas A, B, C, and D which contain a total of 20 firing positions arranged in 10 different configurations (Figure 3). Areas A, B, C, and D are positioned in a north-south line, with area A located slightly west and south of the

other areas. All of the firing positions are oriented due west. To the rear of each area are earthen blast walls and, in many instances, the individual positions are separated from each other by earthen or concrete blast walls.

Areas A, B, and C appear to be engaged primarily in the testing of various types and sizes of artillery/rocket weapons. Area D

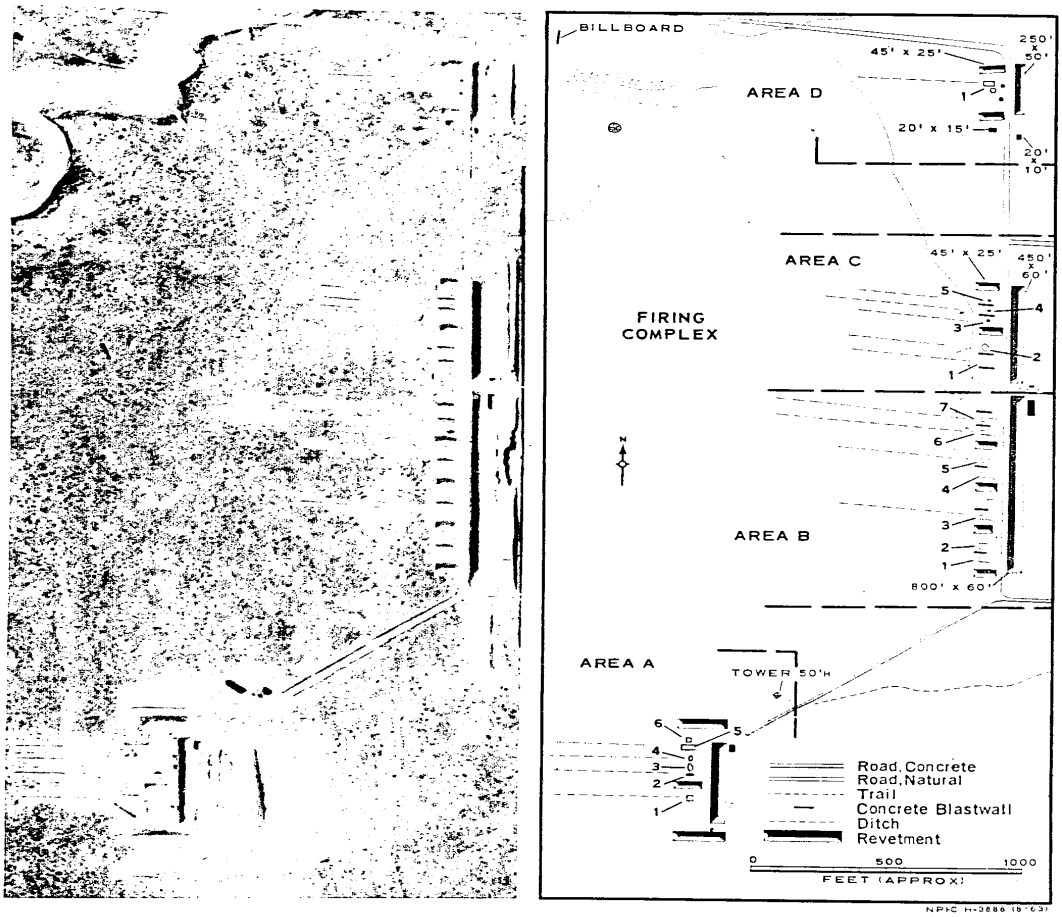
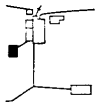


FIGURE 3. FIRING COMPLEX.

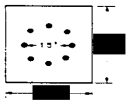
appears to be badly maintained and may possibly have been abandoned. Formerly this area might have been solely associated with the development of artillery and small arms and could still be used for such purposes.

FIRING AREA A



Firing area A is located approximately 2.4 nm southwest of the explosives handling area. On the north and south edges of the firing area, there are earthen blast walls; at the rear of the area there is a 400-foot earthen blast wall measuring approximately 45 feet at the base. The firing area appears to be slightly elevated above the surrounding terrain. This area contains five, or possibly six, positions of different configurations. Extending west and downrange from four of the positions are ditches approximately 15 feet in width and ranging in length from 300 to 800 feet. The exact function or purpose of these ditches has not been determined.

Firing Position A1



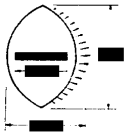
25X1D
25X1D
25X1D

This position is a concrete pad that is almost a square measuring [redacted] feet. Located on the pad are eight dark spots or objects, arranged in a circle with a diameter of 15 feet, which are probably used for anchoring equipment. A ditch extending downrange from this position measures 490 feet in length and is 15 feet in width. A lattice tower measuring 50 feet in height is located 110 feet southwest of the position. An earthen blast wall measuring 70 feet in length separates this position from the other positions.

Firing Position A2 (Not Portrayed)

This position contains an unidentified piece of equipment that is probably positioned on a small concrete pad. This piece of equipment possibly serves as some type of test device. The ditch extending downrange from this position measures 450 feet long and is 15 feet wide.

Firing Position A3



25X1D
25X1D
25X1D
25X1D

This position consists of a very shallow eyeball-shaped concrete pad measuring [redacted] by 25 feet at its extreme limits. The "upper lid" or rear wall of the pad appears to be slightly higher than the "lower lid" or front of the pad. Located in the center of the position is an unidentified object that measures approximately [redacted] feet in length. No ditch extends downrange from this position.

25X1D
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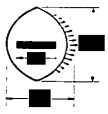
Firing Position A4



This position, measuring [redacted] feet, has the same basic configuration and type of construction, but is smaller than position A3. The rear wall or "upper lid" of the pad is also slightly higher than the front wall; however this rear wall does not extend as far around the perimeter of the "eye" as its counterpart does in position A3. Located in the center of the position is an unidentified object that measures approximately [redacted] feet in length. Unlike position A3 where no ditch was observed, there is one 15 feet wide at this position that extends 430 feet downrange.

25X1D

25X1D

25X1D

Firing Position A5

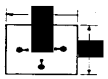
25X1D

This position is a rectangular concrete pad measuring [redacted] feet. Located to the extreme rear center of the pad is a mound-like object. A ditch 15 feet wide extends 440 feet downrange from this position.

25X1D

25X1D

25X1D

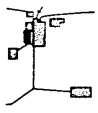


This position is a concrete pad that is almost a square measuring [redacted] feet. Positioned on the pad are four dark spots or objects arranged in a diamond with a distance of [redacted] feet between the north-south and east-west points. These points or objects are probably used for the anchoring of equipment. No ditch extends downrange from this position.

25X1D

Located to the rear of firing area A and behind the 400-foot-long earthen blast wall is a flat-roofed building measuring 30 by 20 feet. In addition to the above-mentioned building, there are two other structures, one located 265 feet northeast of the building and the second 2.2 nm southeast of the building. The structure at the northeast appears to be a tower with a height of approximately 50 feet. The second structure also appears to be a tower measuring approximately 25 feet high.

FIRING AREA B

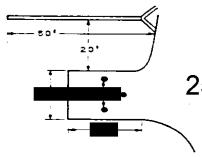


Firing area B is located opposite and west of the explosives handling area. On the north edge of the firing area there is a concrete blast wall measuring [redacted] feet by 10 feet high. At the south end there is an earthen blast wall 95 feet in length, with a width of 35 feet at the base of the wall. To the rear of the area there is a 800-foot earthen blast wall, with a width of 60 feet at the base. The distance from the positions to this wall is approximately 60 feet. The service road leading into the area has a width of approximately [redacted] feet and appears to have a concrete surface. Located at the base of the rear blast wall is a series of towers, probably being used for lighting. This area contains seven positions of similar configuration but with varying dimensions. Extending west and downrange from four of the positions are ditches approximately 15 feet in width and ranging in length from 300 to 800 feet. The function of these ditches cannot be determined.

25X1D

25X1D

Firing Position B1



25X1D

25X1D

This position is a concrete pad that is almost a square measuring [redacted] feet. Positioned on the pad are four dark spots or objects arranged in a diamond with a distance of 15 feet between the north-south and east-west points. These points or objects are probably used for the anchoring of equipment. The configuration (Figure 4) and dimensions of these probable tie-down points are identical to those identified at the Lu-shun (Port Arthur) Cruise Missile Site* and at Area C of the Shuang-cheng-tzu Missile Center 1/. A 50- by [redacted]-foot concrete blast wall is located 20 feet north of the pad and divides this position from firing position B2.

25X1D

25X1D

[redacted]

25X1B

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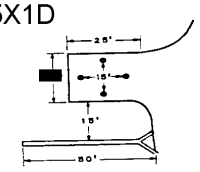
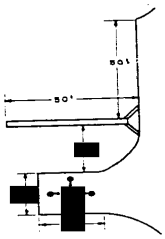
25X1D

Firing Position B2



This position is identical to position B1; however there is only a 15-foot clearance between this pad and the concrete blast wall on the south which separates it from firing position B1. An earthen blast wall 35 feet north of this pad has a length of 85 feet and a width of 35 feet at the base, and divides this position from position B3.

Firing Position B3



25X1D

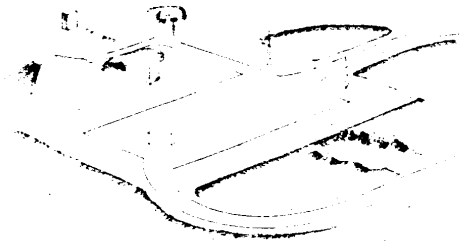
25X1D

25X1D

25X1D

This position is located north of positions B1 and B2 and is separated by an earthen blast wall. This position is a concrete pad measuring [redacted] Positioned on this concrete pad are four dark spots or objects arranged in a diamond with a distance of [redacted] feet between

25X1D



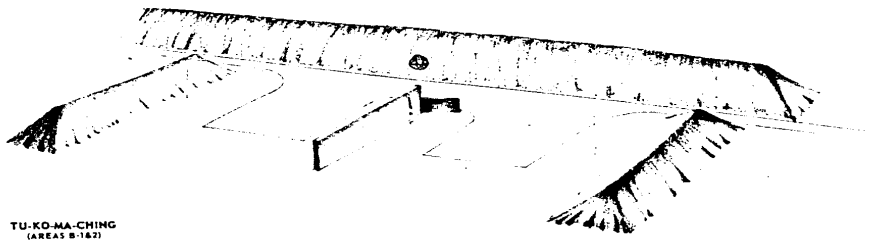


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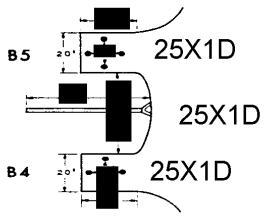
FIGURE 4. COMPARISON OF TIE-DOWN POINTS.

25X1D 25X1D

the north-south and east-west points. These points or objects are probably used for the anchoring of equipment. This position is identical to firing position A6. Located [redacted] feet north of the pad is a concrete blast wall [redacted] feet. Located north of this wall is what appears to be an incomplete position; however this area might be used for mobile equipment. This incomplete position is in turn separated by an earthen blast wall that is located 35 feet south of position B4. Extending downrange from this position is a ditch 470 feet long and 15 feet wide.

25X1D

25X1D

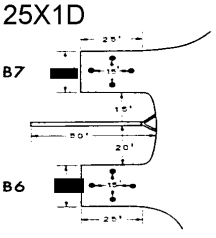


25X1D
25X1D
25X1D

Firing Positions

25X1D These positions are identical to position A4. These positions are divided on their north and south edges by earthen blast walls and from each other by a concrete blast wall 50 by [redacted] feet. Extending downrange from firing position B5 is a ditch 800 by 15 feet.

25X1D

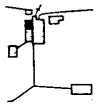


Firing Positions

25X1D

These positions are identical to positions B1 and B2. These positions are divided on the north edge by a concrete wall, on the south by an earthen wall, and from each other by a concrete wall. Located just south of firing position B6 is an unidentified piece of equipment. Extending downrange from these positions are two ditches measuring 700 by 15 and 750 by 15 feet. Located on the north edge and behind the rear blast wall is a gable-roofed building measuring 60 by 20 feet.

FIRING AREA C



Firing area C is located opposite and west of the explosives handling area, and just north of area B. On the north edge of the area is an earthen blast wall measuring 70 feet in length, with a width of 35 feet at the base. There is no dividing wall between this area and area B. Located at the rear of the firing area is a 460-foot earthen blast wall with a width of 55 feet at the base. The distance from the firing positions to this wall is approximately 60 feet. The service road leading into the firing area has a width of approximately [redacted] feet and is natural surfaced. 25X1D Located at the base of the rear blast wall is a series of towers probably being used for lighting. The area contains four or possibly five firing positions of varying configurations and dimensions. Extending west and downrange from the positions are ditches 15 feet in width, ranging in length from 430 to 540 feet. The exact function or purposes of these ditches cannot be determined. Located on the south edge and behind the rear blast wall is a gable-roofed building measuring 15 by [redacted] feet. 25X1D

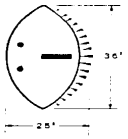
Firing Position C1 (Not Portrayed)

This position is possibly used for testing of mobile equipment. The position consists

25X1D

of a flat natural-surfaced area situated between two 50- by [redacted]-foot concrete walls. Extending downrange from this position is a ditch measuring 430 by 15 feet.

Firing Position C2

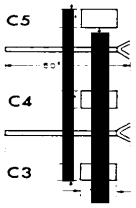


This position is situated between an earthen and a concrete blast wall and is identical in size and configuration to position A3. At this position there are three unidentified objects positioned on the pad, while at position A3 there is a [redacted]-foot unidentified object.

25X1D

25X1D

Firing Positions

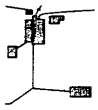


25X1D

These positions are bordered on the north and south edges by earthen blast walls, while the individual positions are separated by 50- by [redacted]-foot concrete walls. These positions appear to be concrete pads measuring 15 by [redacted] feet. Located on position C5 there is an unidentified object casting a small shadow. Extending west from the positions are ditches approximately 15 feet wide, the longest being 540 feet.

25X1D

FIRING AREA D

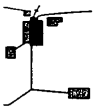


Firing area D is located north of area C and just northwest of the explosives handling area. The area is bordered on three sides by earthen blast walls. The service road leading into the area has a width of approximately [redacted] and is natural surfaced. The area contains only one discernible pad and two small structures. Located at the base of the rear blast wall is a series of towers, probably being used for lighting.

This area at an earlier date may have been associated solely with the development of artillery.

Firing Position D1 (Not Portrayed)

This position consists of a concrete pad measuring 45 by 20 feet. Extending downrange from this position is a ditch 465 by 15 feet. No other facilities were discernible in this area.



25X1D

EXPLOSIVES HANDLING AREA

The explosives handling area, located east of the firing positions, is served by a rail spur and a graded-earth road (Figure 5). The board-fenced area, measuring 2,150 by 725 feet at its extreme limits, contains 28 buildings and structures including a heating plant (item 5), a probable assembly-type building (item 9), and nine explosives handling, processing, and storage buildings, all with lightning rods. Some of the buildings have revetments

and internal blast walls. The area also contains two rail-to-road off-loading platforms and poles for night lighting. A probable waterline connects this area with the explosives storage area. Additional data on structures in the explosives handling area are given in Table 1.

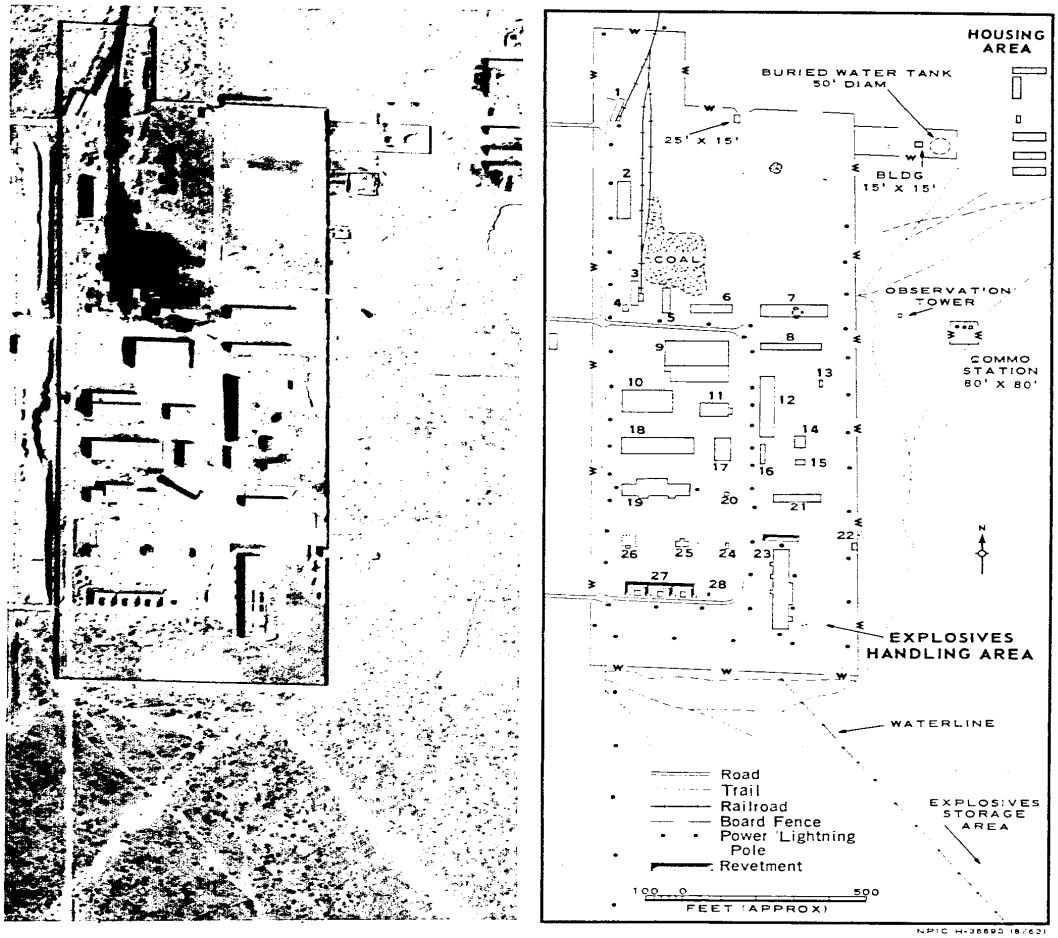


FIGURE 5. EXPLOSIVES HANDLING AREA.

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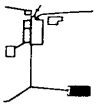
Table 1. Data on Structures in Explosives Handling Area

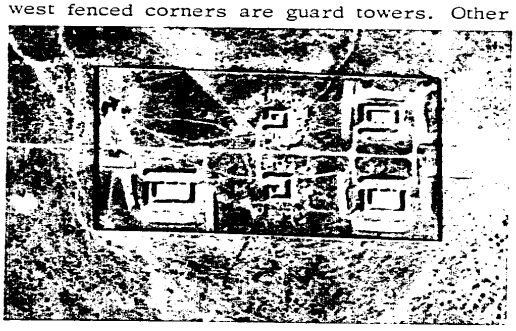
Item (Fig 5)	Description	Dimensions (ft)	Item (Fig 5)	Description	Dimensions (ft)
1	Rail-to-road unloading dock	70 x 15	16	Flat roof bldg	65 x 15
2	Gable roof bldg	125 x 45	17	Flat roof bldg	75 x 45
3	Unloading platform	95 x 25	18	Flat roof bldg	195 x 60
4	Flat roof bldg	15 x 15	19	Flat roof bldg, internal blast walls	195 x 60
5	Heating plant, 3 stacks on roof	90 x 25	20	Standpipe	20 (diam)
6	Gable roof bldg	120 x 30	21	Flat roof bldg	130 x 30
7	Gable roof bldg	190 x 30	22	Flat roof bldg, earth revetment	30 x 20
8	Gable roof bldg	175 x 25	23	Flat roof bldg, internal blast walls	275 x 45
9	Gable roof bldg, concrete platform	180 x 95 150 x 45	24	Gable roof bldg	20 x 10
10	Monitor roof bldg	140 x 70	25	Flat roof bldg, internal blast walls	35 x 30
11	Flat roof bldg	80 x 40	26	Earth mounded bldg	30 x 15
12	Gable roof bldg	200 x 45	27	3 flat-roof revetted bldgs	25 x 15
13	Gable roof bldg	20 x 10	28	Flat roof bldg	15 x 15
14	Gable roof bldg	35 x 30			
15	Flat roof bldg	30 x 15			

EXPLOSIVES STORAGE AREA



An explosives storage area (Figure 6) is located 4,000 feet southeast of the explosives handling area. It is connected to the handling area by an improved dirt road and a probable buried waterline.

This facility is located in a board-fenced area measuring approximately 1,200 by 720 feet. Located at the northeast and the southwest fenced corners are guard towers. Other security measures include lighting poles inside and parallel to the fence. The area contains seven buildings, five of which are revetted on all four sides. Three of these buildings have access roads that pass between the building and the north wall of the revetments. Additional data on the structures in the explosives storage area are given in Table 2.



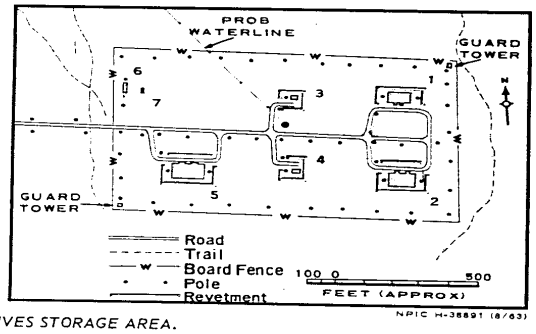


FIGURE 6. EXPLOSIVES STORAGE AREA.

NPIC/R-176/63

Table 2. Data on Structures in Explosives Storage Area

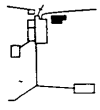
Item (Fig 6)	Description	Dimensions (ft)	Item (Fig 6)	Description	Dimensions (ft)
1	Gable roof revetted bldg two entranceways [redacted] wide and a lightning arrester at each end	100 x 55	3	Gable roof revetted bldg two entranceways [redacted] wide and a lightning arrester at each end	120 x 60
2	Gable roof revetted bldg two entranceways [redacted] wide and a lightning arrester at each end	80 x 55	4	Flat roof revetted bldg	30 x 20
			5	Flat roof revetted bldg	20 x 15
			6	Gable roof bldg	20 x 10
			7	Flat roof bldg small stack at northwest edge	45 x 20

25X1D

25X1D

25X1D

HOUSING AREA



The housing area (Figure 7) is located 430 feet east of the explosives handling area and contains 18 barracks-type buildings capable of housing approximately 1,180 personnel.* In addition to the barracks buildings, there are five associated support-type buildings. The area is connected to the explosives handling area by unimproved roads. Additional data on structures in the housing area are given in Table 3.

*Based on a total of 47,150 square feet, with 40 square feet per man.

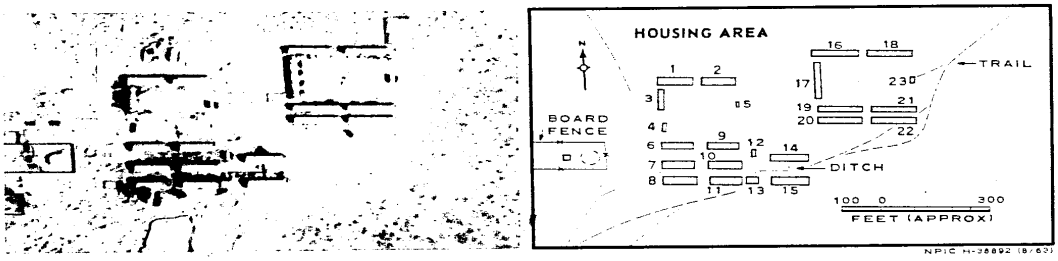


FIGURE 7. HOUSING AREA.

Table 3. Data on Structures in Housing Area

Item (Fig 7)	Description	Dimensions (ft)	Item (Fig 7)	Description	Dimensions (ft)
1	Gable roof bldg	100 x 25	12	Gable roof bldg	20 x 10
2	Gable roof bldg	100 x 25	13	Flat roof bldg	30 x 20
3	Gable roof bldg	70 x 20	14	Gable roof bldg	105 x 20
4	Gable roof bldg	20 x 10	15	Gable roof bldg	105 x 20
5	Gable roof bldg	20 x 10	16	Gable roof bldg	130 x 20
6	Gable roof bldg	95 x 35	17*	Gable roof bldg	130 x 20
7	Gable roof bldg	95 x 35	18	Gable roof bldg	130 x 20
8	Gable roof bldg	95 x 35	19*	Gable roof bldg	130 x 20
9	Gable roof bldg	95 x 35	20*	Gable roof bldg	130 x 20
10	Gable roof bldg	95 x 35	21*	Gable roof bldg	130 x 20
11	Gable roof bldg	95 x 35	22*	Gable roof bldg	130 x 20

* barracks-type bldgs built since [redacted]

25X1D

COMMUNICATIONS STATION

A small communications station (Figure 5) is located 260 feet east of the explosives handling area. The station is located in a wire-fenced area measuring 85 by 75 feet and contains four stick masts. Two of these masts, each 30 feet high and 20 feet apart, may support a horizontal wire. The other two masts may support and house meteorological equipment.

INSTRUMENTATION

The instrumentation units associated with this facility consist of two major elements (Figure 1). The first element, instrumentation line No 1, consists of 28 lattice towers. The second element, instrumentation line No 2, consists of two parts: a line of billboards, and a line of small structures.

INSTRUMENTATION LINE NO 1

A line of 28 self-supporting lattice towers extends downrange, west, for a distance of 13.5 nm from the firing areas. These towers range in height from 45 to 95 feet, and range in separation from each other from 2,700 to 7,000 feet. This variation in height may be done to maintain a horizontal plane with respect to the ground (Figure 8). A small structure 15 by 10 feet is associated with every other tower. On some of the towers, an object is positioned 15 feet from the top. These objects are always located between the line of towers, and on the forward, downrange, side. The top of each tower appears to be enclosed, apparently to form an all-weather environment. An overhead wire leads to some of the towers.

INSTRUMENTATION LINE NO 2

Instrumentation No 2 consists of two instrumentation lines (Figure 9). One line can be best described as four billboards, supported by from 8 to 12 poles each; the other line consists of four structures, with one structure associated with each billboard.

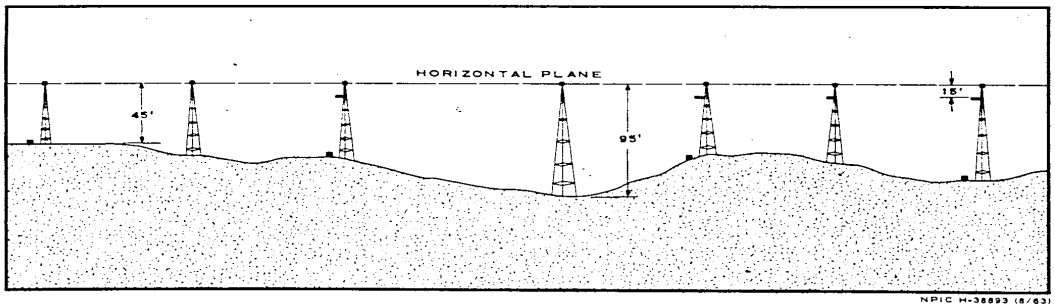


FIGURE 8. SCHEMATIC DIAGRAM SHOWING CONFIGURATION OF TOWERS IN INSTRUMENTATION LINE NO 1.

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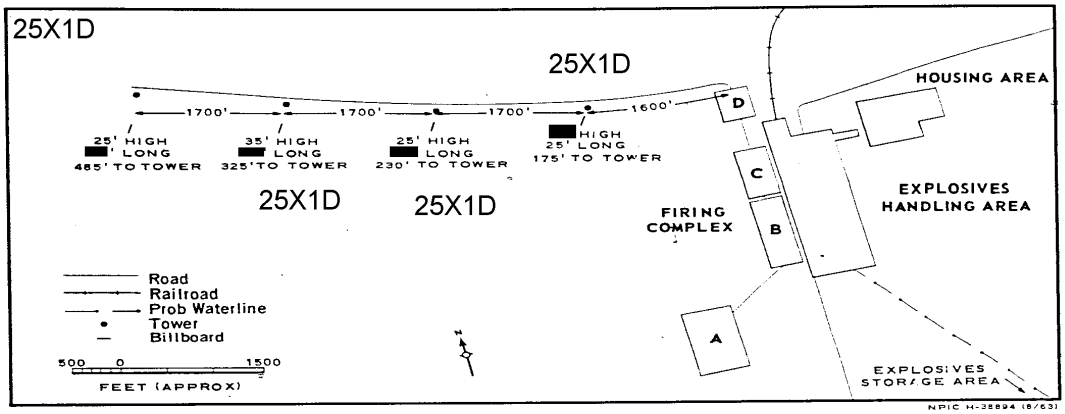


FIGURE 9. INSTRUMENTATION LINE NO 2.

The billboards are 1,700 feet apart and extend out 6,700 feet from the firing area D. The billboards range in length from 15 feet nearest to firing position D to [redacted] feet furthest from the firing position D.

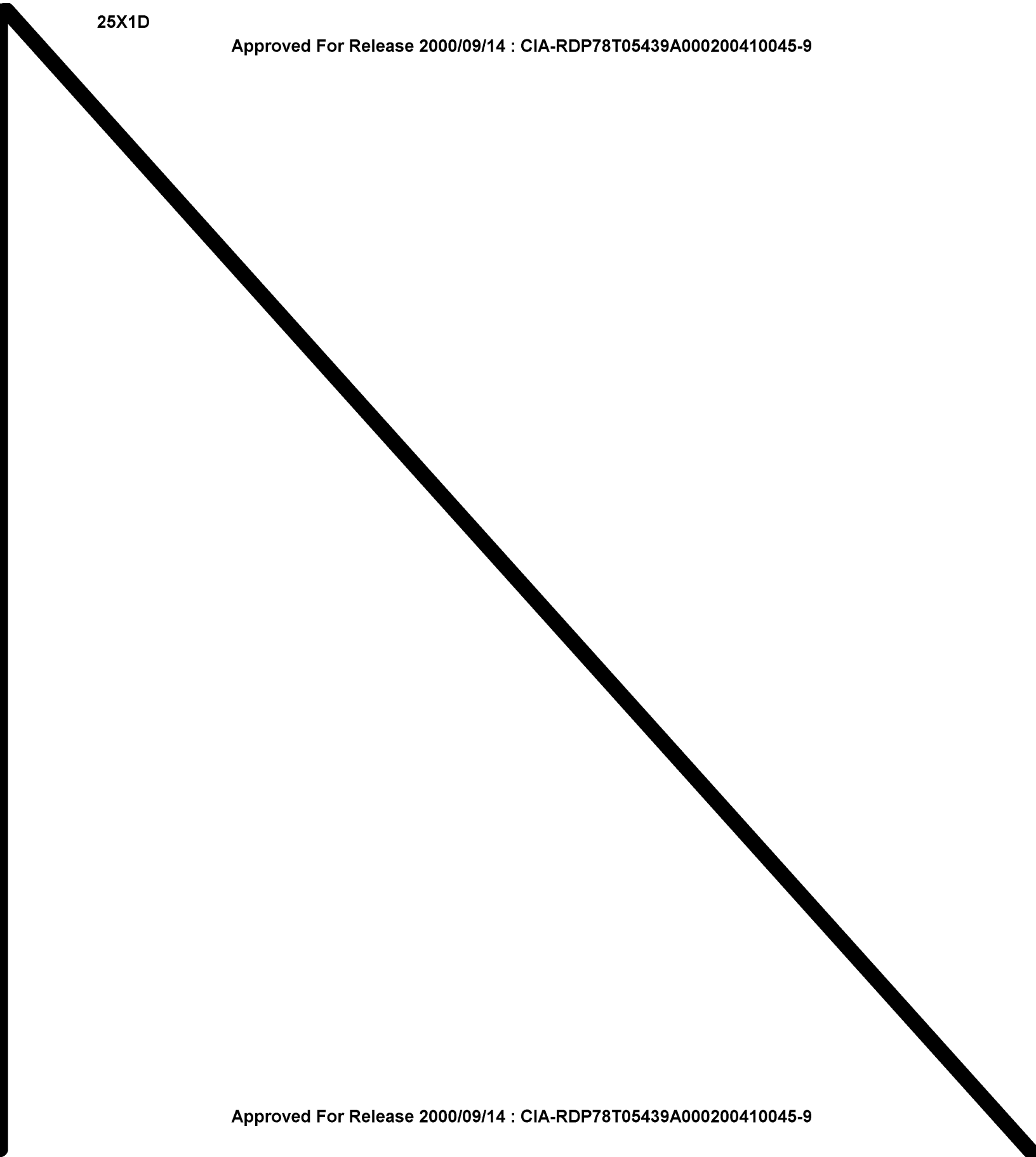
A line of structures, each 15 by 10 feet, also extends out 6,700 feet from the firing position D. The structures range in separation from 175 to 485 feet from the billboards.

The two lines of billboards and structures are not in a straight line, but bell out, so that no three points in each line form a straight line. 25X1D

An overhead wire leads from the firing area D to each of the structures and terminates at the last structure.

25X1D

[redacted]



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REFERENCES

PHOTOGRAPHY 25X1D 25X1C

[redacted]

MAPS OR CHARTS

ACIC. US Air Target Chart, Series 200, Sheet 0288-17AL, 1st ed, Feb 60, scale 1:200,000 (CONFIDENTIAL)

DOCUMENTS

1. CIA. NPIC/R-1108/63, Probable Cruise-Missile Association, Shuang-cheng-tzu Missile Test Center, China, Feb 63 (SECRET/No Foreign Dissem)

REQUIREMENT

DIA. XX 63/56

NPIC PROJECT

J-72/63